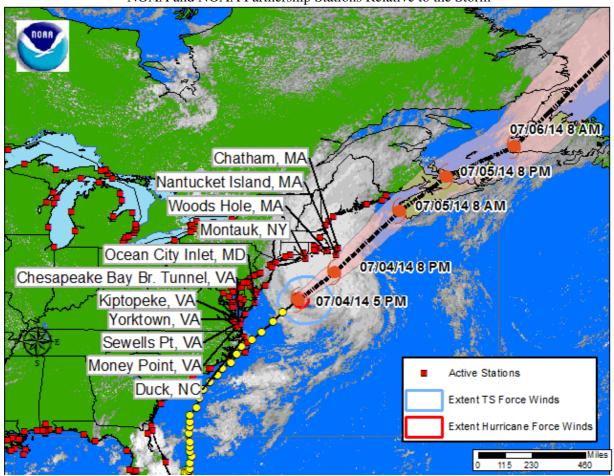


NOAA and NOAA Partnership Stations Relative to the Storm



### Storm Analysis

As of 07/04/2014 18:00 EDT, water levels in North Carolina in the Pamlico sound and the Outer Banks are still running around 1.0-1.5 foot above tidal predictions, but decreasing. In the tidewater region of Virginia up to Ocean City, MD the water level is also running between 1.0 and 1.5 ft above tidal predictions. Wind speeds in Virginia and Maryland range from 10 to 20 knots with some higher gusts, but that will continue to decrease gradually this evening.

Arthur will make its next closest pass to land tonight near Cape Cod, Massachusetts. At this time, water levels are running 0.3-0.8 feet above tidal predictions from Cape Cod, MA down to Eastern Long Island in New York. Currently, barometric Pressure is decreasing along with winds on the increase in that region.

Water Level and Meteorological plots available below are updated automatically. A line denoting Mean Higher High Water (MHHW) is displayed to provide an approximate indication of when flooding inundation may occur.

For additional data, please see the Center for Operational Oceanographic Products & Services website. For

more information or archived products and reports, please see the Storm QuickLook Homepage.

Analyst: CRD

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HURRICANE ARTHUR ADVISORY NUMBER 16 NWS NATIONAL HURRICANE CENTER 500 PM EDT FRI JUL 04 2014

...TROPICAL-STORM-FORCE WINDS EXPECTED OVER CAPE COD AND NANTUCKET TONIGHT...

LOCATION...

ABOUT 170 MI SSW OF CHATHAM MASSACHUSETTS MAXIMUM SUSTAINED WINDS...80 MPH PRESENT MOVEMENT...NE AT 26 MPH MINIMUM CENTRAL PRESSURE...979 MB...28.91 INCHES

#### WATCHES AND WARNINGS

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SUMMARY OF WATCHES AND WARNINGS IN EFFECT...

A TROPICAL STORM WARNING IS IN EFFECT FOR...

- \* NANTUCKET, MA
- \* CAPE COD, MA FROM PROVINCETOWN TO WOODS HOLE

IN ADDITION...HIGH WIND WARNINGS...FOR WINDS IN EXCESS OF 40 MPH... ARE IN EFFECT FOR PORTIONS OF EASTERN MAINE.

#### **DISCUSSION AND 48-HOUR OUTLOOK**

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SATURDAY.

AT 500 PM EDT THE CENTER OF HURRICANE ARTHUR WAS MOVING TOWARD THE NORTHEAST NEAR 26 MPH AND THIS MOTION IS EXPECTED TO CONTINUE DURING THE NEXT DAY OR SO. ON THE FORECAST TRACK...THE CENTER OF ARTHUR WILL PASS SOUTHEAST OF NEW ENGLAND TONIGHT...AND BE NEAR OR OVER WESTERN NOVA SCOTIA EARLY ON

MAXIMUM SUSTAINED WINDS HAVE DECREASED TO NEAR 80 MPH WITH HIGHER GUSTS. ADDITIONAL WEAKENING IS FORECAST DURING THE NEXT 48 HOURS...AND ARTHUR IS EXPECTED TO BECOME A POST-TROPICAL CYCLONE SATURDAY MORNING.

HURRICANE FORCE WINDS EXTEND OUTWARD UP TO 70 MILES FROM THE CENTER AND TROPICAL STORM FORCE WINDS EXTEND OUTWARD UP TO 160 MILES.

THE LATEST MINIMUM CENTRAL PRESSURE REPORTED BY AN AIR FORCE RESERVE HURRICANE HUNTER AIRCRAFT IS 979 MB...28.91 INCHES.

#### HAZARDS AFFECTING LAND

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WIND...TROPICAL STORM CONDITIONS ARE EXPECTED TO REACH THE WARNING AREA IN NEW ENGLAND THIS EVENING. IN ADDITION...WINDS IN EXCESS OF 40 MPH ARE EXPECTED OVER PORTIONS OF EASTERN MAINE ON SATURDAY...BEHIND A COLD FRONT OVERTAKING THE CIRCULATION OF ARTHUR.

STORM SURGE...COASTAL FLOODING IS POSSIBLE ALONG CAPE COD TONIGHT.

RAINFALL...RAINFALL ACCUMULATIONS OF 2 TO 4 INCHES ARE EXPECTED OVER EXTREME EASTERN RHODE ISLAND...EASTERN MASSACHUSETTS...COASTAL MAINE.

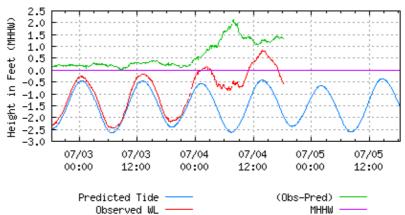
SURF...SWELLS GENERATED BY ARTHUR ARE AFFECTING PORTIONS OF THE COAST OF NORTH CAROLINA...THE MID-ATLANTIC...AND NORTHEAST UNITED STATES. SWELLS WILL BEGIN AFFECTING PORTIONS OF SOUTHEASTERN CANADA TONIGHT. THESE SWELLS ARE EXPECTED TO CAUSE LIFE-THREATENING SURF AND RIP CURRENTS.

#### FORECASTER BROWN

For the purpose of timely release, data contained within this QuickLook have undergone a "limited" NOS Quality Assurance/Control; however, the data have not yet undergone final verification. All data subject to NOS verification.

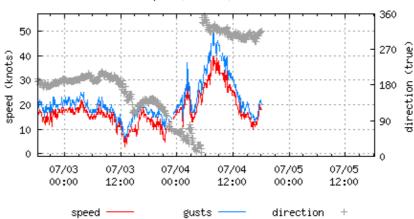
Jump to: Chesapeake Bay Bridge Tunnel - Water Level, Chesapeake Bay Bridge Tunnel - Winds, Chesapeake Bay Bridge Tunnel - Barometric, Chesapeake Bay Bridge Tunnel - Air/Water Temp, Kiptopeke - Water Level, Kiptopeke - Winds, Yorktown USCG Training Center - Water Level, Yorktown USCG Training Center - Winds, Yorktown USCG Training Center - Barometric, Yorktown USCG Training Center - Air/Water Temp, Sewells Point - Water Level, Sewells Point - Barometric, Money Point - Water Level, Money Point - Winds, Ocean City Inlet - Water Level, Ocean City Inlet - Winds, Montauk - Water Level, Montauk - Barometric, Nantucket Island - Water Level, Nantucket Island - Winds, Nantucket Island - Barometric, Nantucket Island - Air/Water Temp, Woods Hole - Water Level, Woods Hole - Barometric, Chatham - Water Level, Chatham - Winds, Duck - Water Level, Duck - Winds

# NOAA/NOS/CO-OPS <u>8638863 Chesapeake Bay Bridge Tunnel, VA</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



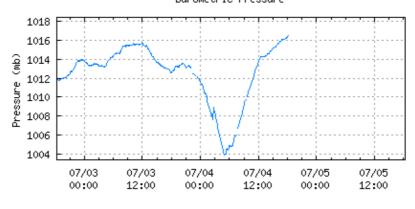
Last Observed Sample: 07/04/2014 18:12 (EDT). Data relative to MHHW Observed: -0.63 ft. Predicted: -1.95 ft. Residual: 1.32 ft. Historical Maximum Water Level: Nov 12 2009, 4.66 ft. Next High Tide: 07/05/2014 01:57 (EDT), -0.66 ft.

# NOAA/NOS/CO-OPS <u>8638863 Chesapeake Bay Bridge Tunnel, VA</u> Wind Speed / Gusts / Direction



Last Observed Sample: 07/04/2014 18:12 (EDT) Wind Speed: 17 knots Gusts: 20 knots Direction: 318° T

# NOAA/NOS/CO-OPS <u>8638863 Chesapeake Bay Bridge Tunnel, VA</u> Barometric Pressure

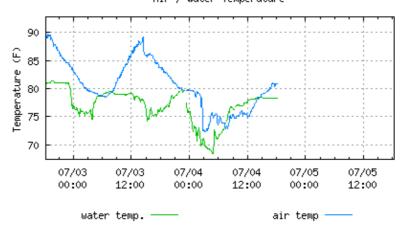


barometric pressure ——

Last Observed Sample: 07/04/2014 18:12 (EDT)

Barometric Pressure: 1016.5 mb

#### NOAA/NOS/CO-OPS <u>8638863 Chesapeake Bay Bridge Tunnel, VA</u> Air / Water Temperature



Last Observed Sample: 07/04/2014 18:12 (EDT) Water Temperature: 78.3° F Air Temperature: 80.8° F

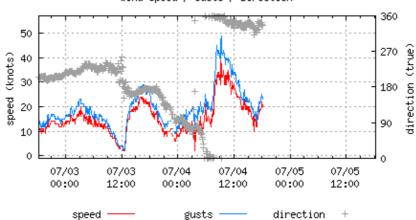
# NOAA/NOS/CO-OPS 8632200 Kiptopeke, VA Preliminary Water Level, relative to Mean Higher High Water(MHHW) 2.0

07/03 07/03 07/04 07/04 07/05 07/05 00:00 12:00 00:00 12:00 00:00 12:00 Predicted Tide (Obs-Pred) Observed WL MHHW

-3.0

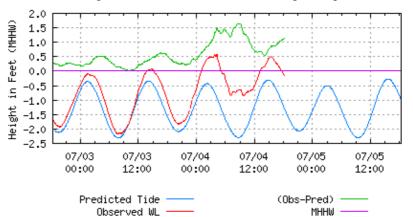
Last Observed Sample: 07/04/2014 18:12 (EDT). Data relative to MHHW Observed: -0.63 ft. Predicted: -1.80 ft. Residual: 1.17 ft. Historical Maximum Water Level: Mar 8 1962, 4.13 ft. Next High Tide: 07/05/2014 02:21 (EDT), -0.59 ft.

### NOAA/NOS/CO-OPS 8632200 Kiptopeke, VA Wind Speed / Gusts / Direction



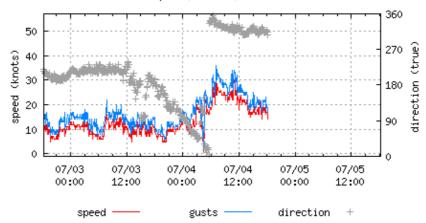
Last Observed Sample: 07/04/2014 18:12 (EDT) Wind Speed: 20 knots Gusts: 23 knots Direction: 337° T

# NOAA/NOS/CO-OPS <u>8637689 Yorktown USCG Training Center, VA</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



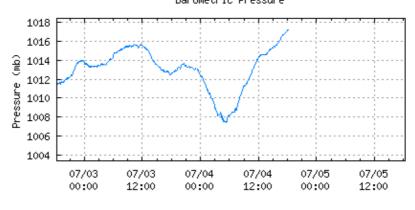
Last Observed Sample: 07/04/2014 18:12 (EDT). Data relative to MHHW Observed: -0.16 ft. Predicted: -1.31 ft. Residual: 1.15 ft. Historical Maximum Water Level: Nov 12 2009, 4.27 ft. Next High Tide: 07/05/2014 02:58 (EDT), -0.50 ft.

### NOAA/NOS/CO-OPS 8637689 Yorktown USCG Training Center, VA Wind Speed / Gusts / Direction



Last Observed Sample: 07/04/2014 18:12 (EDT) Wind Speed: 14 knots Gusts: 17 knots Direction: 307° T

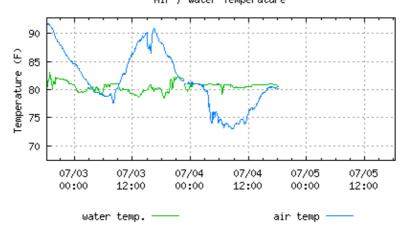
# NOAA/NOS/CO-OPS <u>8637689 Yorktown USCG Training Center, VA</u> Barometric Pressure



barometric pressure —— Last Observed Sample: 07/04/2014 18:12 (EDT)

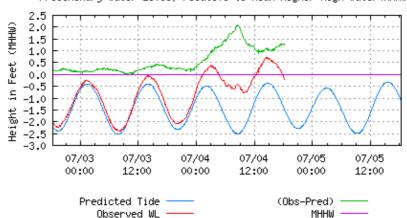
Barometric Pressure: 1017.2 mb

#### NOAA/NOS/CO-OPS <u>8637689 Yorktown USCG Training Center, VA</u> Air / Water Temperature



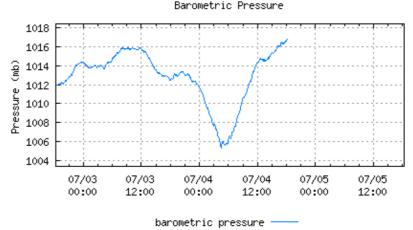
Last Observed Sample: 07/04/2014 18:12 (EDT) Water Temperature: 80.6° F Air Temperature: 80.2° F

# NOAA/NOS/CO-OPS <u>8638610</u> Sewells Point, VA Preliminary Water Level, relative to Mean Higher High Water(MHHW)



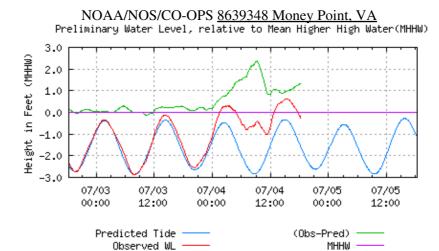
Last Observed Sample: 07/04/2014 18:12 (EDT). Data relative to MHHW Observed: -0.23 ft. Predicted: -1.49 ft. Residual: 1.26 ft. Historical Maximum Water Level: Aug 23 1933, 5.26 ft. Next High Tide: 07/05/2014 02:52 (EDT), -0.57 ft.

### NOAA/NOS/CO-OPS 8638610 Sewells Point, VA

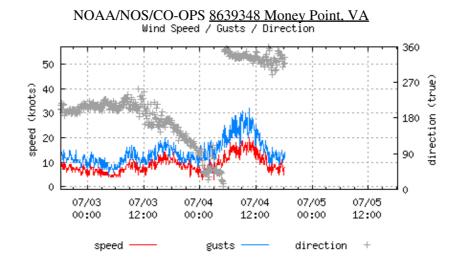


Last Observed Sample: 07/04/2014 18:12 (EDT)

Barometric Pressure: 1016.8 mb

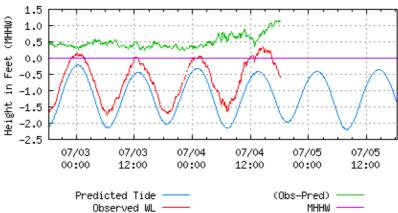


Last Observed Sample: 07/04/2014 18:12 (EDT). Data relative to MHHW Observed: -0.25 ft. Predicted: -1.58 ft. Residual: 1.33 ft. Historical Maximum Water Level: Nov 13 2009, 5.37 ft. Next High Tide: 07/05/2014 03:10 (EDT), -0.56 ft.



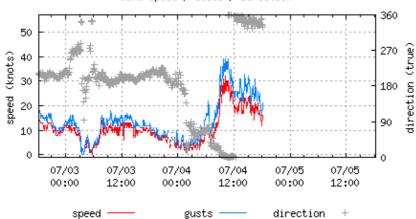
Last Observed Sample: 07/04/2014 18:12 (EDT) Wind Speed: 8 knots Gusts: 12 knots Direction: 333° T

# NOAA/NOS/CO-OPS <u>8570283 Ocean City Inlet, MD</u> Preliminary Water Level, relative to Mean Higher High Water(MHHW)



Last Observed Sample: 07/04/2014 18:12 (EDT). Data relative to MHHW Observed: -0.57 ft. Predicted: -1.73 ft. Residual: 1.16 ft. Historical Maximum Water Level: Feb 5 1998, 3.61 ft. Next High Tide: 07/05/2014 01:44 (EDT), -0.42 ft.

#### NOAA/NOS/CO-OPS <u>8570283 Ocean City Inlet, MD</u> Wind Speed / Gusts / Direction



Last Observed Sample: 07/04/2014 18:12 (EDT) Wind Speed: 16 knots Gusts: 21 knots Direction: 334° T

#### NOAA/NOS/CO-OPS 8510560 Montauk, NY Preliminary Water Level, relative to Mean Higher High Water(MHHW) 1.0 Height in Feet (MHHW) 0.5 0.0 -0.5 -1.0 -1.5 -2.0 -2.5 07/03 07/03 07/04 07/05 07/04 07/05 00:00 12:00 00:00 12:00 00:00 12:00 Predicted Tide (Obs-Pred) Observed WL MHHW

Last Observed Sample: 07/04/2014 18:12 (EDT). Data relative to MHHW Observed: -0.42 ft. Predicted: -1.03 ft. Residual: 0.61 ft. Historical Maximum Water Level: Aug 31 1954, 5.91 ft. Next High Tide: 07/05/2014 03:13 (EDT), -0.71 ft.

#### NOAA/NOS/CO-OPS 8510560 Montauk, NY Barometric Pressure 1018 1016 Pressure (mb) 1014 1012 1010 1008 1006 1004 07/03 07/03 07/04 07/04 07/05 07/05 00:00 12:00 00:00 12:00 00:00 12:00

Last Observed Sample: 07/04/2014 18:12 (EDT)

Barometric Pressure: 1008.7 mb

barometric pressure

#### NOAA/NOS/CO-OPS 8449130 Nantucket Island, MA Preliminary Water Level, relative to Mean Higher High Water(MHHW) 1.0 Height in Feet (MHHW) 0.5 0.0 -0.5 -1.0 -1.5 -2.0 -2.5 -3.0 -3.5 07/03 07/04 07/05 07/03 07/04 07/05 00:00 12:00 00:00 12:00 00:00 12:00

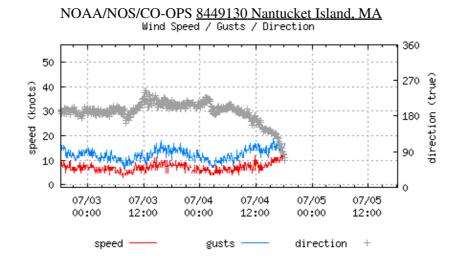
Predicted Tide

Observed WL

Last Observed Sample: 07/04/2014 18:12 (EDT). Data relative to MHHW Observed: 0.14 ft. Predicted: -0.41 ft. Residual: 0.55 ft. Historical Maximum Water Level: Oct 30 1991, 4.29 ft. Next High Tide: 07/04/2014 18:12 (EDT), -0.41 ft.

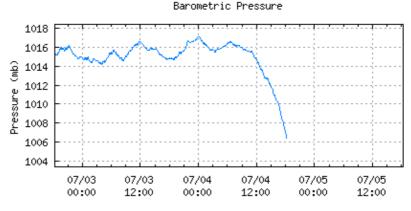
(Obs-Pred)

MHHW



Last Observed Sample: 07/04/2014 18:12 (EDT) Wind Speed: 11 knots Gusts: 16 knots Direction: 67° T

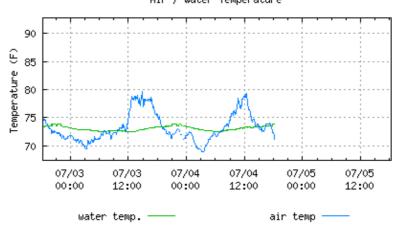
### NOAA/NOS/CO-OPS 8449130 Nantucket Island, MA



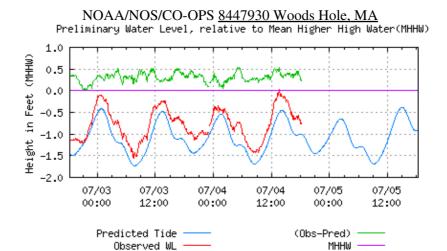
barometric pressure —— Last Observed Sample: 07/04/2014 18:12 (EDT)

Barometric Pressure: 1006.4 mb

#### NOAA/NOS/CO-OPS <u>8449130 Nantucket Island, MA</u> Air / Water Temperature



Last Observed Sample: 07/04/2014 18:12 (EDT) Water Temperature: 73.8° F Air Temperature: 71.1° F

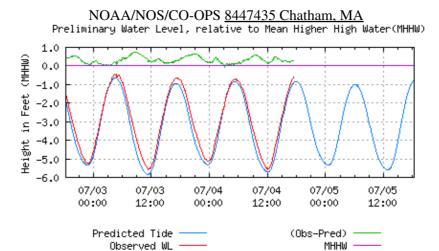


Last Observed Sample: 07/04/2014 18:12 (EDT). Data relative to MHHW Observed: -0.74 ft. Predicted: -1.00 ft. Residual: 0.26 ft. Historical Maximum Water Level: Sep 21 1938, 8.58 ft. Next High Tide: 07/05/2014 02:19 (EDT), -0.66 ft.

#### NOAA/NOS/CO-OPS 8447930 Woods Hole, MA Barometric Pressure 1018 1016 Pressure (mb) 1014 1012 1010 1008 1006 1004 07/03 07/03 07/04 07/04 07/05 07/05 00:00 12:00 00:00 12:00 00:00 12:00 barometric pressure

Last Observed Sample: 07/04/2014 18:12 (EDT)

Barometric Pressure: 1008.4 mb



Last Observed Sample: 07/04/2014 17:24 (EDT). Data relative to MHHW Observed: -0.61 ft. Predicted: -0.90 ft. Residual: 0.29 ft. Historical Maximum Water Level: Feb 26 2010, 2.96 ft. Next High Tide: 07/04/2014 17:52 (EDT), -0.84 ft.

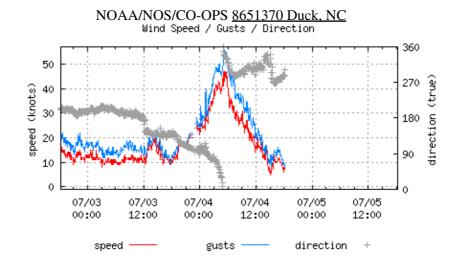
# NOAA/NOS/CO-OPS <u>8447435 Chatham</u>, <u>MA</u>

	1-1-1-1								
This data type is not currently									
available from this station.									
-									
11			i	l	i.,				

Last Observed Sample: 07/04/2014 17:24 (EDT) Wind Speed: n/a Gusts: n/a Direction: n/a

#### NOAA/NOS/CO-OPS 8651370 Duck, NC Preliminary Water Level, relative to Mean Higher High Water(MHHW) 3.0 Height in Feet (MHHW) 2.0 1.0 0.0 -1.0 -2.0 -3.0 -4.0 07/03 07/04 07/03 07/05 07/04 07/05 00:00 12:00 00:00 12:00 00:00 12:00 Predicted Tide (Obs-Pred) Observed WL MHHW

Last Observed Sample: 07/04/2014 18:12 (EDT). Data relative to MHHW Observed: -1.26 ft. Predicted: -2.84 ft. Residual: 1.58 ft. Historical Maximum Water Level: Sep 18 2003, 4.13 ft. Next High Tide: 07/05/2014 01:06 (EDT), -0.85 ft.



Last Observed Sample: 07/04/2014 18:12 (EDT) Wind Speed: 7 knots Gusts: 8 knots Direction: 303° T

### Latest Water Level Observations on MHHW

Station ID	Station Name	Date/Time	Observed Water Level	Predicted Tide	Residual Water Level	24 Hour Maximum Storm Tide
8638863	Chesapeake Bay Bridge Tunnel, VA	07/04/2014 18:12 (EDT)	-0.63 ft	-1.95 ft	1.32 ft	0.85 ft
8632200	Kiptopeke, VA	07/04/2014 18:12 (EDT)	-0.63 ft	-1.80 ft	1.17 ft	0.62 ft
8637689	Yorktown USCG Training Center, VA	07/04/2014 18:12 (EDT)	-0.16 ft	-1.31 ft	1.15 ft	0.58 ft
8638610	Sewells Point, VA	07/04/2014 18:12 (EDT)	-0.23 ft	-1.49 ft	1.26 ft	0.73 ft
8639348	Money Point, VA	07/04/2014 18:12 (EDT)	-0.25 ft	-1.58 ft	1.33 ft	0.63 ft
8570283	Ocean City Inlet, MD	07/04/2014 18:12 (EDT)	-0.57 ft	-1.73 ft	1.16 ft	0.35 ft
8510560	Montauk, NY	07/04/2014 18:12 (EDT)	-0.42 ft	-1.03 ft	0.61 ft	0.21 ft
8449130	Nantucket Island, MA	07/04/2014 18:12 (EDT)	0.14 ft	-0.41 ft	0.55 ft	0.14 ft
8447930	Woods Hole, MA	07/04/2014 18:12 (EDT)	-0.74 ft	-1.00 ft	0.26 ft	0.04 ft
8447435	Chatham, MA	07/04/2014 17:24 (EDT)	-0.61 ft	-0.90 ft	0.29 ft	-0.61 ft
8651370	Duck, NC	07/04/2014 18:12 (EDT)	-1.26 ft	-2.84 ft	1.58 ft	0.74 ft

Center for Operational Oceanographic Products & Services (CO-OPS) | National Ocean Service (NOS) National Oceanic and Atmospheric Administration | U.S. Department of Commerce